GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated as a non-commercial institution for the increase of geographic knowledge and its popular diffusion. General Headquarters, Washington, D. C.)

Contents for Week of April 8, 1940. Vol. XIX. No. 7.

1. Bombed Sylt Island, Strategic Base of Northernmost Germany
2. Old-New Iceland and Hands across the Sea
3. Hungary: Monarch-less Monarchy Ruled by Fleet-less Admiral
4. The Ocean's Floor Explored with Deep-Sea Soundings
5. War Economy Changes National Habits

Photograph by Rudolf Balogh

A HUNGARIAN "STROLLER" TEACHES A TODDLER TO STEP OUT

In Nograd county, the rising generation learns to rise and walk with a homemade push-powered three-wheeled stroller. Grandfather watches while his carefully whittled handiwork supports the baby's uncertain first steps. The little girl has a bonnet to match her home-made velvet dress, just as her mother does (Bulletin No. 3).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Entered as second-class matter, Jan. 27, 1922, Post Office, Washington, D. C., under act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of Oct. 3, 1917, authorized Feb. 9, 1922. Copyright, 1940, by National Geographic Society, Washington, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Bombed Sylt Island, Strategic Base of Northernmost Germany

A SMALL Y-shaped island in the North Sea—Sylt—has been sought out again and again by British aircraft on reconnaissance flights. The surprise attack on the island last month, although not seriously damaging, confirmed its name of "retaliation" target of British bombers, since Allied raids on Sylt have followed German raids on the British base of Scapa Flow (map, next page).

The island, an important base, is the northernmost bit of Germany territory in the North Sea. About half of Sylt extends north of the mainland German-Danish boundary line, which has to make a northward loop to bring the whole island under German jurisdiction.

Germany's Close Approach to England

In a direct air line, the island is only some 300 miles from the nearest part of England, or little more than an hour's ride as the bomber flies.

Sylt is linked with Germany proper by a seven-mile-long causeway, named for Hindenburg, across the intervening arm of the North Sea. A railroad over the causeway connects the island with the mainland, and with a network of continental lines stretching northward into Denmark and east and south into Germany. The causeway was built between 1923 and 1927.

This 40-square-mile island, Germany's largest in the North Sea, is one of the North Frisian group. Its shape, long and thin, is such that it offers a difficult target for aerial attack from high altitudes. Though 20 miles long, it is for much of its length only a half-mile wide. At the center, it thickens somewhat, and a peninsula extends eastward to within seven miles of the mainland. It is from this peninsula that the Hindenburg causeway was built to the mainland coast.

In normal times, Sylt, now evacuated in areas used for military purposes, has a population of about 5,000 people, of the colorful and hardy race of Frisians who have made their home for centuries on the Frisian Islands. On Sylt, they live by fishing, lobstering, farming, and cattle-raising. The centrally located town of Westerland, with its excellent sandy beach backed by long dunes, is a popular peacetime summer resort, and one of the most important havens for vacationists in the North Frisian Islands.

Became German along with Southern Schleswig-Holstein

The railway that crosses on the Hindenburg causeway to Sylt's eastward-flung peninsula runs to Westerland, and there branches into a T-shaped system running northward to List Land, as the northern portion of the island is called, and southward to the narrowing sandy section known as Hornum. The headquarters of the German air base and the munitions depot are at Hornum, making it a military objective of considerable importance.

The western shore, exposed to the battering of the North Sea, has been bolstered up with masonry. A familiar feature of Sylt's western coastline is the Rote Kliff, a dark red sloping cliff rising above the dunes to a height of 150 feet, the loftiest point on the island. On this eminence stands the principal lighthouse.

North of Sylt lies Lister Tief (Lister Deep), the channel between Sylt and the northern island of Römö which is the best entrance into sheltered anchorage along the adjacent German and Danish coasts, protected by the chain of North Frisian Islands. The eastern coast of Sylt is sought for shelter during North Sea storms.

Sylt, along with the mainland duchies of Schleswig-Holstein, was once a Danish possession. The war of 1864, with Prussia and Austria joined against Den-

UMI

Photograph by Erno Vadas

A ROW OF WORKMEN SWINGING SCYTHES IN UNISON MAKES A HUMAN HARVESTING MACHINE

On large estates in Hungary where tractors and gang plows have replaced human labor at planting time, the harvest still finds some work for the man with the scythe. He is usually followed through the waist-high wheat by a woman with a sickle, who picks up the grain and shocks it. Reaping and mowing machines are opposed as long as whole families are dependent on the share of grain they are paid for harvesting. About a third of the nation's cultivated acreage is planted in wheat, the leading grain, which far exceeds the acreage in corn or rye. Wheat is the second most valuable export, following livestock (Bulletin No. 3).

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Old-New Iceland and Hands across the Sea

A MILLION-DOLLAR loan from Uncle Sam to Iceland has been approved by the current session of Congress, and now the small North Atlantic island is well on the way to becoming a customer of the United States.

A sister state sharing the same king as Denmark, Iceland has previously done its food shopping in European markets. War scarcities have led the little "Saga Island" to send to the United States for supplies of rye and wheat, gasoline and leather and electrical equipment. The new trade trend is accompanied by a new steamship line between Iceland and the United States, and an Icelandic concern for tourist traffic. Fearing that the frigid name may frighten away visitors by its implied threat of perpetual winter, islanders have already talked of changing Iceland to Sun Island, in honor of summer midnight suns, or to Thule, on the assumption that ancient Greeks referred to Iceland as their Ultima Thule, at the outermost edge of the earth.

Viking Outpost Has a Birthday Riddle

Although Uncle Sam's new customer celebrated a 21st birthday only last December, Iceland has 1,010 years of democratic history behind it. Settled in the 9th century by such varied groups as Irish monks and Vikings, it established as early as 930 an elected assembly, called "The Althing."

Icelanders, losing their independence several centuries later, fell under the influence of Norway, and later under the rule of Denmark. It was not until 1918 that Iceland again became an independent state—joined with Denmark only by having the same king—and received the new constitution that made it a young nation with a long past.

Nearly 40,000 square miles in area, shaped like a giant flounder floating 200 miles off the east coast of Greenland, Iceland is a country of contradictions. Its climate, tempered by the warm, north-flowing Gulf Stream, nullifies its Arctic location. Little colder than many parts of the United States, its farms and comfortable villages belie its forbidding name.

On the island, fire and ice meet, when snow-capped volcanoes erupt, sending tons of water and lava and blocks of ice down the mountainsides. Glaciers and lava beds together cover one-fourth of the island's soil.

In the 15th century the Black Death destroyed two-thirds of Iceland's population; 300 years later smallpox took another 10,000 victims. A bad famine followed, and in 1782 occurred the worst volcanic eruption of its history, destroying farm houses and livestock, and sending ashes as far away as Norway. The chief volcano of this turbulent island is Hekla, near the southern shores.

A Country Without a Jail, Army, or Navy

In spite of disaster, however, and the ever-present problems of meager soil and poor mineral deposits, hard-working Icelanders have made considerable modern progress. Roads and telegraph and telephone lines have been built. Electricity has been widely installed, trucks and automobiles introduced. In 1938, after using German planes and German pilots, Iceland started its own local airline and is now flying planes on regular routes between the capital, Reykjavik, and northern towns.

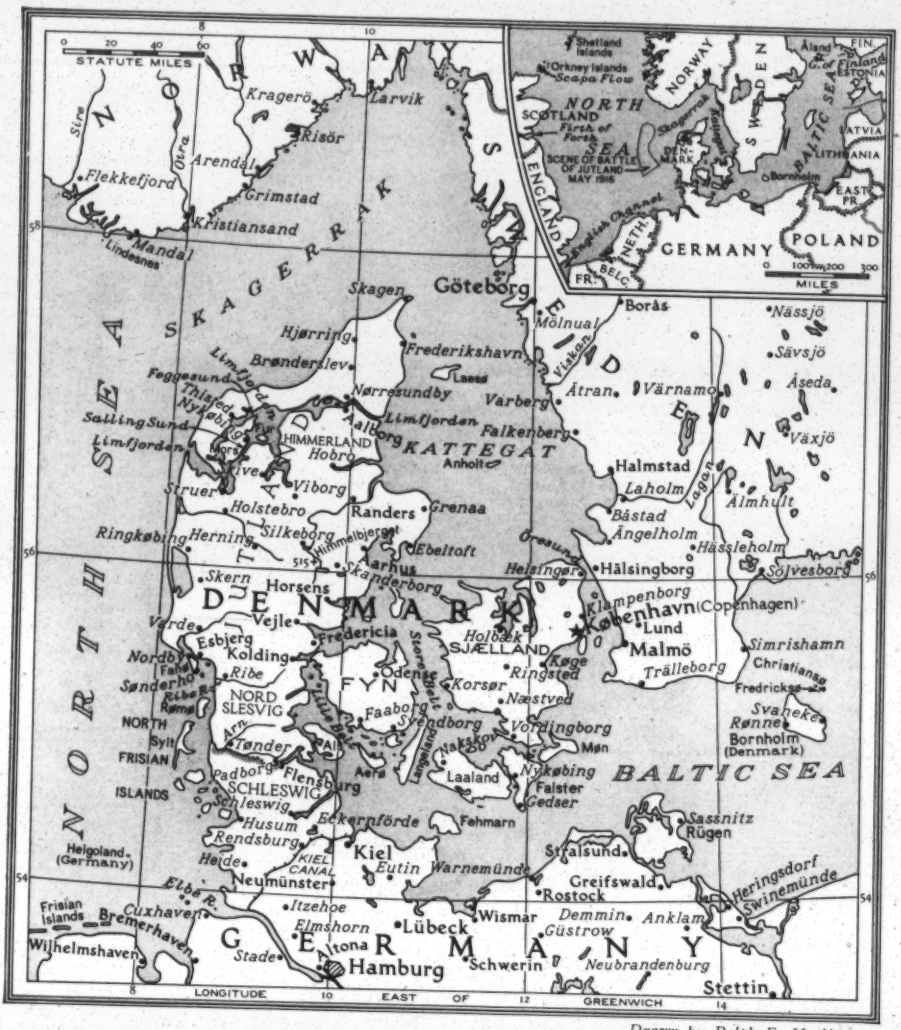
Proud of its famous sagas and old culture (Iceland knew the bright light of learning when much of Europe was still in the Dark Ages), this small nation of less than 120,000 people today claims literacy for all normal adults. Returned

UMI

mark, however, left the entire region in the hands of the Prussians, who desired it in order to build the strategic Kiel Canal which eventually gave Germany direct passage between the Baltic and North Seas. After the World War, a plebiscite returned the northern section to Denmark, the rest remaining with Germany.

Note: Some other sections of Germany, accessible to reconnaissance flights by Allied forces, are described in "Flying Around the Baltic," *National Geographic Magazine*, June, 1938; "Changing Berlin," February, 1937; "What Is the Saar?" February, 1935; "Freiburg, Gateway to the Black Forest," August, 1933; "Hamburg Speaks with Steam Sirens," June, 1933; and "Renascent Germany," December, 1928.

Bulletin No. 1, April 8, 1940.


STATUTE MILES
NORWAY
SWEDEN
Kragerö
Larvik
Risör
Arendal
Flekkefjord
Grimstad
Kristiansand
Mandal
Lindesnes
SKAGERRAK
NORTH SEA
Skagen
Göteborg
Hjørring
Frederikshavn
Brønderslev
Nørresundby
Aalborg
Limfjorden
HIMMERLAND
KATTEGAT
Hobro
Anholt
Viborg
Holstebro
Randers
Grenaa
Silkeborg
Ebeltoft
Århus
Skanderborg
Skern
Horsens
Ringkøbing
Herning
Vejle
Fredericia
Esbjerg
Kolding
Ribe
Varde
DENMARK
FYN
Odense
Korsør
Næstved
Faaborg
Svendborg
Nakskov
Nykøbing
Falster
Gedser
Laaland
Aero
Tønder
Flensburg
SCHLESWIG
NORTH FRISIAN ISLANDS
Husum
Rendsburg
Eckernförde
Fehmarn
Kiel
KIEL CANAL
Eutin
Warnemünde
Neumünster
Itzehoe
Elbe R.
Cuxhaven
Bremerhaven
Wilhelmshaven
Frisian Islands
Helgoland (Germany)
Elmshorn
Lübeck
Wismar
Rostock
Stralsund
Greifswald
Sassnitz
Rügen
Hamburg
Altona
Schwerin
Güstrow
Demmin
Anklam
Neubrandenburg
Stettin
Heringsdorf
Swinemünde
GERMANY
POLAND
Helsingør
Hälsingborg
Helsingborg
Köbenhavn (Copenhagen)
Lund
Malmö
Trälleborg
Ringsted
Køge
Holbæk
SJÆLLAND
Klampenborg
Simrishamn
Christianso
Fredrickso
Svaheke
Rønne
Bornholm (Denmark)
BALTIC SEA
Mön
Sölvesborg
Hässleholm
Ängelholm
Båstad
Laholm
Halmstad
Åtran
Värnamo
Varberg
Falkenberg
Limfjorden
Mölnual
Boràs
Nässjö
Sävsjö
Åseda
Växjö
Älmhult
Laagan
Viskan
Öresund
Sound
Skagerrak
Kattegat
Limfjorden
Thisted
Nykøbing
Sallingsund
Feggesund
Løgstør
Aalborg
Struer
Ringkøbing
Skjern
Esbjerg
Nordby
Ribe
Rømø
Sylt
Padborg
Schleswig
Husum
Helgoland (Germany)
Heide
Frisian Islands
Cuxhaven
Bremerhaven
Wilhelmshaven
Stade
Elbe R.
Neumünster
Kiel
Eutin
Warnemünde
Fehmarn
Eckernförde
Flensburg
Tønder
Aero
Laaland
Nykøbing
Falster
Gedser
Mön
Faaborg
Svendborg
Nakskov
Odense
Korsør
Næstved
Ringsted
Køge
Holbæk
SJÆLLAND
Lund
Malmö
Trälleborg
Helsingør
Hälsingborg
Köbenhavn (Copenhagen)
Klampenborg
Simrishamn
Christianso
Fredrickso
Svaheke
Rønne
Bornholm (Denmark)
BALTIC SEA
Sassnitz
Rügen
Stralsund
Greifswald
Rostock
Wismar
Demmin
Anklam
Güstrow
Neubrandenburg
Stettin
Heringsdorf
Swinemünde
Hamburg
Altona
Schwerin
Lübeck
Elmshorn
Itzehoe
Neumünster
Kiel
Eutin
Warnemünde
Fehmarn
Eckernförde
Husum
Rendsburg
Helgoland (Germany)
Heide
Frisian Islands
Cuxhaven
Bremerhaven
Wilhelmshaven
Stade
Elbe R.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Hungary: Monarch-less Monarchy Ruled by Fleet-less Admiral

THE recent visit of the Hapsburg archduke Otto, pretender to the now empty Austro-Hungarian throne, has reminded the United States that, although Austria has been incorporated into Greater Germany, Hungary is still a monarchy without a monarch.

From 1867 until 1918, Hungary was linked to Austria in a dual monarchy. In 1918, after the World War, Hungary at first became a republic, via the revolution route, with a Count at its head. Then, in 1919, it turned into an anti-royalist Soviet state, under the "dictatorship of the proletariat." In 1920 the monarchy status was restored by a counter-revolution, and the previous regimes—both republic and Soviet—were annulled. The restoration of a monarch, however, was postponed for an indefinite period, and since 1921 the head of the government has been a regent. The monarch-less monarchy without a seacoast is now ruled by a fleet-less admiral, Nicholas Horthy, who, since 1937, has been freed from any responsibility to Parliament.

Lost Thirteen Million People, Gained a Million and a Half

These rapid changes came to a nation diminished by war losses. As a defeated power, Hungary after the World War gave up some 90,000 square miles of land and 13 million people, to Romania, Yugoslavia, and Czecho-Slovakia. Only three millions of those lost, however, were Magyars, the dominant race of Hungary. Within the country's shrunken borders remained an almost solid national group of Magyars; with a people approximately nine-tenths Hungarian, this nation has had few of the minority problems which have harassed other states.

Rebellious at the peace terms which, lopping off mountain borders and fertile plains, reduced her to roughly one-third of her former area and population, Hungary has refused to accept the boundaries as final. Hungarian flags fly at half-mast in mourning for the lost territories; shop window decorations, street car posters, restaurant signs, and children's games show maps of Hungary's former size contrasted with her present reduced state. School exercises keep the question continually before the young. Stamps, postcards, and buttons bear the Hungarian slogan, "Will we remain as we are?" answered by the words "No, no, never!"

Furthermore, Hungary reclaimed a large section of her former nationals and territory in the dismemberment of Czecho-Slovakia in 1939. Occupation of Carpatho-Ukraine (Ruthenia) and cession of land from Slovakia have enlarged Hungary by some 10,000 square miles and a million and a half people. The present area exceeds 45,000 square miles, and the population is above ten and a half millions.

Farming Chief Occupation

The return of the regions formerly a part of Czecho-Slovakia has restored to Hungary much of the former mountain areas which were pared away by post-war treaty. But on the whole the country is still made up largely of low rolling plains suitable only for farming and grazing.

With an economy balanced before the World War between timber, mineral, stock, and farm production, Hungary after her reduction became almost entirely agricultural. Farming is the chief pursuit of the people and the activity on which most industry is based. There is, however, some coal, iron, and bauxite (aluminum ore) mining, and fishing preserves are valuable. Wheat (illustration, inside cover), corn, rye, oats, sugar beets, and tobacco are some of the more important crops.

For these supplies Germany is by far Hungary's best customer. A consider-

UMI

travelers report that this island has no beggars and no jails. With no army and no navy, Iceland has a balanced budget.

Although handicapped by lack of many raw materials, and a soil usually producing only such crops as hay, small potatoes, and turnips, the island in recent years has been making the most of other natural resources. Fisheries supply food and trade (illustration, below). Numerous swift rivers, useless for navigation, are valuable as sources of hydro-electric power. Its hot springs are being harnessed to furnish natural steam heat. Already the thriving capital city, Reykjavik, is piping Nature's gift of warmth to its state hospital, hotels, offices, schools, and some of its homes. By such magic, greenhouses continuously produce flowers and fruits.

Iceland's hot springs are potential health centers for tourists, many of whom have already been attracted to that part of the world by mineral waters, wild volcanic scenery, sports facilities, and general sightseeing in a land of ancient Vikings' descendants under a summer midnight sun. When Christianity was introduced in the 9th century, converts disliked the chill of cold water in baptism, so it became the custom to use the comfortable warmth of hot springs.

As the home of that "Grandmother of Parliaments," the Althing, Iceland today shows its visitors at Reykjavik one of the world's oldest and least showy of government headquarters. Moved from the original site of the assembly, at nearby Thingvellir, the Althing has been in continuous existence—except between 1800 and 1843—since 930.

Note: Additional photographs and information about Iceland are found in "Henry Hudson, Magnificent Failure," *National Geographic Magazine*, April, 1939; "Flying Around the North Atlantic," September, 1934; "Walking Tour Across Iceland," and "Island of the Sagas," April, 1928; and "Sailing the Seven Seas in the Interest of Science," December, 1922.

See also in the GEOGRAPHIC NEWS BULLETINS: "Iceland Also a Land of Fire," April 23, 1934.

Bulletin No. 2, April 8, 1940.

Photograph by Herbert Felton

MANY A HERRING'S LAST RIDE STARTS FROM SIGLUFJÖRDUR

The herring swims into Iceland's waters, and rides out in a barrel, for the cod and herring fisheries supply the island's chief export. The port of Siglufjördur, named for the fjord on which it stands, is the fifth largest "city" of Iceland, with fewer than 3,000 inhabitants; yet it figures in international trade, specializing in herrings cured by a Dutch process and formerly in great demand in Poland. Herring meal, for livestock feed, is another export.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

The Ocean's Floor Explored with Deep-Sea Soundings

A MOUNTAIN peak almost two miles high was discovered last month 150 miles from the coast of California, was measured, and carefully added to the map—but it has not yet been seen by human eyes. It is 4,500 feet under water. Ocean liners plying between San Francisco and the Orient cross this mountain, for it is one of the drowned peaks which corrugate the bottom of the Pacific.

Scientists predict that eventually deep-sea soundings will be sufficient to chart all the mountains and the valleys on the ocean floors—epeirogeny, as oceanographers call it. Some visionaries of the Jules Verne type look forward to the time when window-walled submarines with powerful searchlights will carry photographers and tourists on extended trips into the depths of the ocean to range through this vast, unexplored region, more than twice as large as the known world.

Scenic Landscape Wonders of the Deep

The broadest ocean surfaces are in the southern hemisphere, but the most interesting submarine surfaces are those north of the Equator, deformed and gashed by great undersea upheavals. Violent agitations have torn the floors of the Caribbean Sea, and the Atlantic and Pacific Oceans, in a broad band between the latitude of the Panama Canal and that of Philadelphia. Within this zone, especially in the Pacific, vast plains and plateaus, tall peaks and deep canyons form an unknown mountainous underwater world. In the shallower portions, ocean currents are the breezes that sway submarine trees, and fish are the variegated birds flitting among the branches, while varied coral formations branch out like flowering shrubs.

Down the middle of the Atlantic, extending 8,000 miles south from Iceland, runs a mountainous ridge almost 10,000 feet above the adjoining basins. Soundings already recorded indicate that more than half of the Atlantic is 13,000 feet deep, and three-fourths is at least 6,500 feet deep. The discovery last year of a record depth north of Puerto Rico and Hispaniola established a new "low" for this ocean—28,680 feet, nearly five and a half miles. This notable depression was named the Milwaukee Deep, for the United States Navy cruiser from which the sounding was made.

The Pacific has more great depths than any other ocean—eight in excess of 30,000 feet. The deepest known hole in the Pacific is 35,400 feet, more than six and a half miles, just northeast of Mindanao of the Philippine Islands. It is the greatest recorded ocean depth in the world. The record in the South Pacific Ocean is 30,930 feet. A depth of 17,850 feet has been recorded in the Arctic Ocean, and one of 14,274 feet near the Antarctic Continent.

The Ocean Floor Now Echoes Its Depth

The comparative shallowness of the sea in many places has been dramatized by suggesting the great changes that would occur in the boundaries of continents if the waters of the oceans should sink only six hundred feet, a little more than the height of the Washington Monument. Ireland would then be joined to England by dry land, except for the North Channel. England in turn would become part of the mainland of Europe, for the bed of the English Channel would be high and dry. A strip of land 1,500 miles wide would connect North America with Asia. New Guinea would become part of Australia.

The ocean fringes have been carefully charted near land for navigation purposes for centuries, but it has been only in the past eighty-five years that extensive soundings have been made to chart the floor of the oceans themselves. Cable-lay-

UMI

able trade with Austria also has been taken over by Germany with the absorption of the smaller nation.

An odd characteristic of farming in Hungary is the concentration of farms around the villages. This is explained as a survival of the days when men lived close together rather than in isolated farmsteads, as protection against frequent invasions from the Turks and others.

Hungary is still a land of villages and small rural communities (illustration, cover). The only city of any size is the capital, Budapest, with over a million inhabitants. The next ranking city, Szeged, has less than 150,000 population.

Note: Striking photographs of Hungary, both urban and rural, are found in "Magyar Mirth and Melancholy," *National Geographic Magazine*, January, 1938; "Sunday in Mezokovesd," April, 1935; "Hungary, a Kingdom Without a King" and "Budapest, Twin City of the Danube," June, 1932; and "Danube, Highway of Races," December, 1929.

See also in the GEOGRAPHIC NEWS BULLETINS: "Carpatho-Ukraine Was 'Postscript' Eastern Tip," April 3, 1939; "Border Struggle Marks Carpatho-Ukraine as Another Trouble Spot," January 30, 1939; "Hungary Claims Czechoslovakian Region of Farms and Forests," October 24, 1938; "Pécs, Coal Center in Hungary's 'West Virginia'," November 5, 1934.

Bulletin No. 3, April 8, 1940.

Photograph by Rudolf Balogh

THE MODERN BO-PEEP CAN FIND HER SHEEP AND SHEAR THEM TOO

Shepherds tend the herds of sheep (1,628,000 of them) that graze on Hungary's broad plains the year around, but shepherdesses in prosaic aprons clip the heavy wool. This big sheep in Mezöhegyes, near the southeastern border, is a two-woman shearing job. Unclipped sheepskins are used for making coats for the shepherds. While Hungary exports wool, woolen cloth is the country's principal import from Great Britain.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

War Economy Changes National Habits

WORKING, recreation, and eating habits are being adjusted to the war economy which grips well over one-half of the world's population, now engaged in declared and undeclared conflict. In Europe, so many new restrictions have been put into effect to conserve supplies and regulate behavior that decree-making (and changing) has become a major activity of government.

As certain non-essential commodities have been curtailed, shipbuilding, airplane manufacture, and munitions-making have boomed, along with odd war-born specialties such as the art of camouflage, air-raid protection, code detection, and laboratory research to perfect new fighting machines. Potential "war babies"—significant and insignificant—have suddenly appeared on the nations' business doorsteps. In the Philippines, for example, activated carbon, suitable for use in gas masks, has been recently produced from coconut shells.

Back to Work for Women, Back to Bicycles for Motorists

The cotton spindles of France are working at nearly 100 per cent capacity, to meet increased home and colonial requirements. The North African colony of French Morocco has a wartime cotton-growing industry.

Yugoslavia is developing forest resources to increase production of such naval stores as resin, pitch and tar, for export to Germany. A manufacturing firm in India recently received a half-million dollar order for steel helmets for Egyptian troops.

With men mobilized, European women are taking over their civilian occupations, to become carpenters, mail sorters, bus drivers, mechanics. On the little Ile d'Oleron, off the coast of Brittany, every able-bodied man left the island on the day of French mobilization. The work, from fishing and mail delivery to pharmacy and dynamo tending, is now done by women, one of whom is acting as mayor.

Gasoline rationing has resulted in a large-scale movement back to the bicycle. In Italy gasoline is selling at $1.25 a gallon, and gasoline substitutes flourish (illustration, next page). In the Far East, Tokyo's private car owners are limited to 11 gallons a month; in Yokohama, to only 9 gallons.

"Make Mine 'Mam' and Eggs"

England will have fewer books to read, and those few will be printed on poorer quality paper, with narrow margins, because war has interfered with shipments of pulp wood from the Scandinavian countries. Square broom handles and tent poles are additional economies of wood, making it possible to use timber of smaller cross-section than round poles require. In normal times, wood and wood products form some 85 per cent of Finland's exports, about half of which go to England. Germany is also an important buyer of Finnish wood products; so the Reich, too, is feeling the same paper shortage.

Other minor effects of the war are reported from Germany, where *ersatz* ("substitute") materials for food and clothing were used even before the war. The once large and diverse output of candles has been reduced from 64 varieties to 14; the present supply is made of paraffin mixed with hard wax, instead of stearin and beeswax which are useful in the more essential industries of a nation at war.

An indirect result of the Sino-Japanese conflict has been the return to local vegetable oils (instead of American oil and electrical appliances) for many of the lamps of China.

As the warring world tightens its belt against a long siege, Englishmen have

UMI

ing advanced the knowledge of submarine geography, but until recently recordings of depths of more than 6,000 feet numbered but one to every 23,000 square miles.

For years measurements were made by the slow procedure of dropping a plummet (illustration, below) suspended by a piano wire. To make even one sounding in 12,000 feet of water required stopping a ship for an hour. Today, delicate instruments measure the time it takes a sound produced at the sea's surface to echo from the bottom, thus measuring the depth by the speed of sound. This can now be done while a ship is moving rapidly, and many commercial vessels are equipped with sonic measuring devices to speed the work.

Sound travels almost five times as fast in water as in the air, so that the speed under water is close to a mile a second. The time of the returning echo, therefore, must be recorded with the utmost accuracy. The problem is complicated by the fact that the speed of sound in water varies with the water's saltiness, its temperature, and varying pressure. Air pressure at sea level is about 15 pounds to the square inch; 100 feet below sea level, salt water pressure is 50 pounds to the square inch. At 5,000 feet deep, the pressure is 13,500 pounds to the square inch.

Note: Principal depressions, usually called "deeps" or "depths," island heights, and submerged plateaus of the oceans may be located on the Society's Maps of the Atlantic and Pacific Oceans, copies of which may be obtained from The Society's Washington, D. C., headquarters at 50c (paper edition) and 75c (linen edition).

Bulletin No. 4, April 8, 1940.

Official Photograph, U. S. Navy.

EARLY UNDERSEA SCIENCE NOTES WERE WRITTEN IN LEAD

Lead, the heaviest metal available until recently, was used to sink a rope or wire through measurable depths to the ocean bottom. The sailor shown "heaving the lead" is performing one of the routines in the systematic study of ocean geography, begun almost a century ago by Matthew Fontaine Maury, superintendent of the U. S. Naval Observatory, the godfather of the Hydrographic Office and the Weather Bureau, and author of the pioneer textbook on oceanography. The weight which the leadsman swings is hollow on the bottom, and brings back to the surface a sample of the sand and shells on the ocean floor. New devices to measure depth by timing echoed sound have disclosed ocean deeps too great for lead and cable to plumb (from Latin *plumbum*, "lead").

been urged to breakfast on smoked mutton, called "mam" and "macon," instead of ham and bacon. Germans present cards for practically all of their groceries, including meat, milk, butter, cheese, sugar, tea, and coffee. Food rationing for Frenchmen went into effect last month, with limitations placed on such items as pastry and horse meat.

In Japan, the sale of white, or polished, rice is now banned. To conserve diminishing stocks of this important item of Japanese diet, reports mention steps to make the national rice drink, *sake*, out of tapioca imported from South Sea islands.

Neutrals as well as belligerents are rationing food supplies. Both Switzerland and Italy have instituted food rationing. Soap, as well as sugar and coffee, is on the scarce list in Italy.

Note: Some recent articles about countries whose economic systems have been disrupted by war are "Italy, from Roman Ruins to Radio," *National Geographic Magazine*, March, 1940; and "France Farms as War Wages" and "Behind Netherlands Sea Ramparts," February, 1940.

See also in the GEOGRAPHIC NEWS BULLETINS: "Apple Carts of International Trade Upset by Wars," March 18, 1940; "Coffee: A War Refugee," February 19, 1940.

Bulletin No. 5, April 8, 1940.

NEW SUPPLEMENT TO GEOGRAPHIC INDEX

The 1937-39 Supplement to the Cumulative Index of the *National Geographic Magazine* has now been released, and copies are available at 25¢ each. The Cumulative Index covers the years 1899 through 1936. Bound in brown cloth with a sturdy envelope pocket on the back cover for the annual Supplement, the Index can be obtained at $1.00.

The Cumulative Index and Supplement greatly increase the reference value of *The Magazine* for teachers and students. The Supplement, by itself, is helpful to teachers who preserve their magazines for a year or two only.

Photograph by John Patric

WOODEN HORSEPOWER BY THE BUSHEL FEEDS ITALY'S GASOLINE-STARVED MOTORS

The change from gasoline to charcoal gas as motive power, in the move to make the country independent of foreign petroleum, makes the bus driver a fireman as well on this "wood-burning" bus. The "gas tank" is an insulated firebox in the rear, where charcoal is kept smoldering all day. Pipes draw the charcoal fumes through filter tanks into the motor. Automobiles also are being remodeled for use of charcoal gas fuel.

UMI